**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1. (currently amended) A method of screening *in vitro* for modulators of RDGC GPCR phosphatase activity, the method comprising the steps of:

(i) providing a first sample comprising a wild type rhodopsin ~~G protein coupled receptor~~ and a Drosophila RDGC phosphatase comprising the sequence set forth in SEQ ID NO:1;

(ii) contacting the first sample with a test compound suspected of having the ability to modulate RDGC GPCR phosphatase activity;

(iii) providing a second sample comprising a mutant rhodopsin lacking the last 18 amino acids at the cytoplasmic terminus as compared to wild type and a Drosophila RDGC phosphatase comprising the sequence set forth in SEQ ID NO: 1; ~~the rhodopsin G protein coupled receptor and a mutant Drosophila RDGC phosphatase~~;

~~(iv) contacting the second sample with the test compound suspected of having the ability to modulate RDGC GPCR phosphatase activity;~~

~~(v) detecting Drosophila RDGC GPCR phosphatase activity in the first sample and in the second sample; and~~

(iv) ~~(vi) comparing~~ detecting a change in the level of Drosophila RDGC GPCR phosphatase activity in the first sample contacted with the compound ~~and the second sample~~, thereby detecting RDGC GPCR phosphatase activity; thereby detecting modulators of RDGC GPCR phosphatase activity;

wherein the test compound is a RDGC mimetic.

2.-4. (canceled)

5. (previously presented) The method of claim 1, wherein the rhodopsin is recombinant.

6. (previously presented) The method of claim 1, wherein the step of detecting comprises a G-protein coupled receptor phosphorylation assay.

7. (previously presented) The method of claim 1, wherein the step of detecting comprises a G-protein coupled receptor mobility assay.

8. (previously presented) The method of claim 1, wherein the step of detecting comprises a G-protein coupled receptor signal transduction assay.

9. (previously presented) The method of claim 1, wherein the first sample and the second sample comprise a cell.

10. (previously presented) The method of claim 9, wherein the cell is selected from the group consisting of a eukaryotic cell, an insect cell, a mammalian cell.

11. (previously presented) The method of claim 10, wherein the cell is selected from the group consisting of a Drosophila cell or a human cell.

12. (previously presented) The method of claim 1, wherein the first sample and the second sample comprise a membrane comprising a G-protein coupled receptor.

13. (previously presented) The method of claim 1, wherein the first sample and the second sample comprise an aqueous sample or a solid-phase sample.

14. (canceled)

15. (currently amended) A method of screening a cell for modulators of RDGC GPCR phosphatase activity, the method comprising the steps of:

(i) providing a first cell comprising rhodopsin and a Drosophila RDGC phosphatase comprising the sequence set forth in SEQ ID NO:1;

(ii) contacting the first cell with a test compound suspected of having the ability to modulate RDGC GPCR phosphatase activity;

(iii) providing a second cell comprising a mutant rhodopsin lacking the last 18 amino acids at the cytoplasmic terminus as compared to wild type and a Drosophila RDGC phosphatase comprising the sequence set forth in SEQ ID NO: 1; ~~the rhodopsin and a mutant Drosophila RDGC phosphatase;~~

~~(iv) contacting the second cell with the test compound suspected of having the ability to modulate RDGC GPCR phosphatase activity;~~

~~(v) detecting Drosophila RDGC GPCR phosphatase activity in the first cell and in the second cell; and~~

(iv) ~~(vi) comparing~~ detecting a change in the level of Drosophila RDGC GPCR phosphatase activity in the first cell contacted with the compound ~~and the second cell~~, thereby detecting RDGC GPCR phosphatase activity; thereby detecting modulators of RDGC GPCR phosphatase activity;

wherein the test compound is a RDGC mimetic.

16. (canceled)

17. (previously presented) The method of claim 15, wherein the rhodopsin is recombinant.

18. (canceled)

19. (previously presented) The method of claim 15, wherein the first cell and the second cell are selected from the group consisting of a eukaryotic cell, a mammalian cell, an insect cell.

20. (previously presented) The method of claim 19, wherein the first cell and the second cell are selected from the group consisting of a Drosophila cell or a human cell.

21. (canceled)

22. (previously presented) The method of claim 15, wherein the first cell and the second cell comprise an aqueous sample or a solid-phase sample.

23.-38. (canceled)